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MARKET
GARDENERS'
PRICE LIST

SEEDS AND
FERTILIZERS

1920

GRAND RAPIDS GROWERS
ASSOCIATION

GRAND RAPIDS, MICHIGAN

Officers



RUDOLPH ZANT, *Secretary-Treasurer*



WILFRED S. HANNAH, *Vice-President*



R. YONKER, *President*

Announcement

THE Grand Rapids Growers Association is a co-operative buying and selling organization of nearly all of the Hot-House and outdoor growers of vegetables, as well as fruits, around Grand Rapids.

We solicit the patronage of all who appreciate "Price consistent with quality" when buying either seeds or fertilizers, and we aim to carry in stock such lines that will please you and be trade winners for us.

We take pleasure in presenting this book, our first annual catalogue, to you for your careful consideration.



Grand Rapids Growers
Association, Inc.

Terms

TO OUR CUSTOMERS outside of Grand Rapids and who wish shipments made to them, we give the following instructions:

Write plainly your name and address, and use one side of paper only. If no price is named in our price list, we will give you our best price on day of shipment.

Money can be sent safely by Post Office order, express money order, or your check will be perfectly satisfactory.

We pay postage or express charges on all garden seeds listed in this book; all other prices are f. o. b. Grand Rapids and subject to market changes and our confirmation.

We sell all our seeds under non-warranty terms as adopted by all reputable seed firms, and which reads as follows:

“We give no warranty, express or implied, as to description, quality or productiveness of any seeds or plants we send out, and will not be in any way responsible for the crop. If purchaser does not accept the goods on these terms they are at once to be returned.”

Seed Satisfaction

Grand Rapids Forcing Tomato

Grand Rapids Forcing Radish

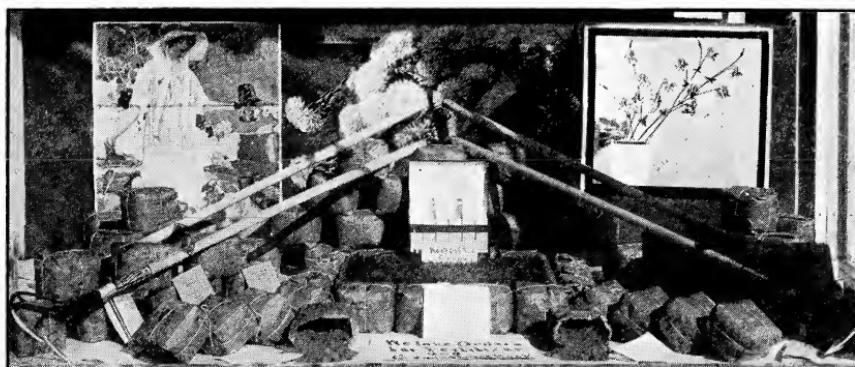
Grand Rapids Forcing Lettuce

Grand Rapids Forcing Cucumber

*We supply growers with this
seed throughout the
United States*

*Grand Rapids Growers
Association, Inc.*

GRASS SEEDS



Grass Seed Window Display

PRICES

	Per Lb.
Fine Mixed Lawn OZ.....	\$.40
White Clover (White Dutch) CY.....	.90
Kentucky Blue Grass PZ.....	.50
Red Top—Fancy NC.....	.50
RED TOP—Unhulled NZ.....	.30
English Rye Grass NC.....	.30
Orchard Grass PZ.....	.50
Shady Lawn Mixture OY.....	.50

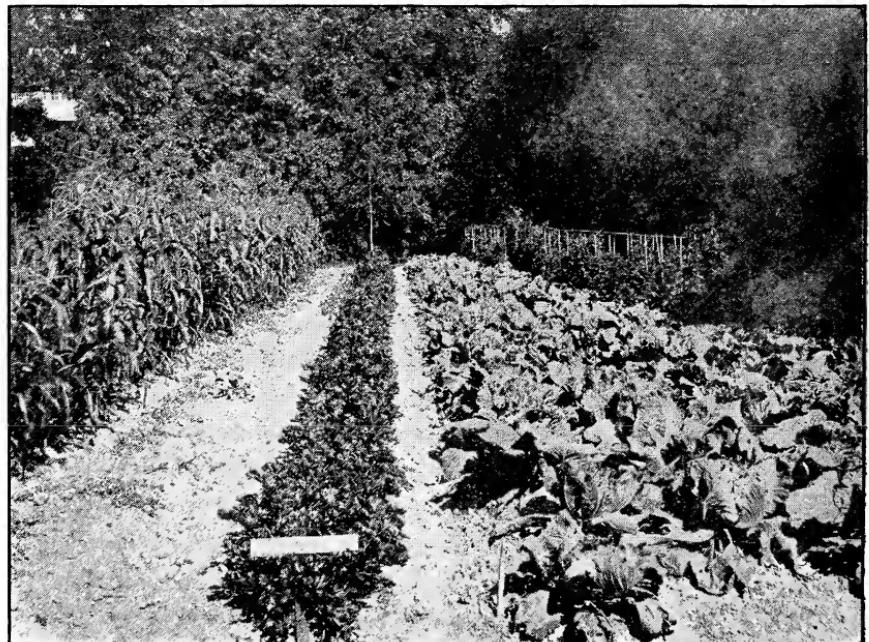
Prices per 100 pounds upon application.

Market on all grass seeds is very unsettled, and our prices are subject to change without notice.

HOME GARDENS

We wish to call your attention to the two pictures of Home Gardens given you on Page Six. This is strictly a Grand Rapids garden, and shows a hill-side and lake effect, and the Skinner System of irrigation in operation.

Celery, cabbage, strawberries, corn and an endless variety of vegetables are grown to advantage in this garden supplying the owner's table with fresh vegetables "right from the garden." A small hot-house is used to hurry along spring planting.



AN ATTRACTIVE LAWN



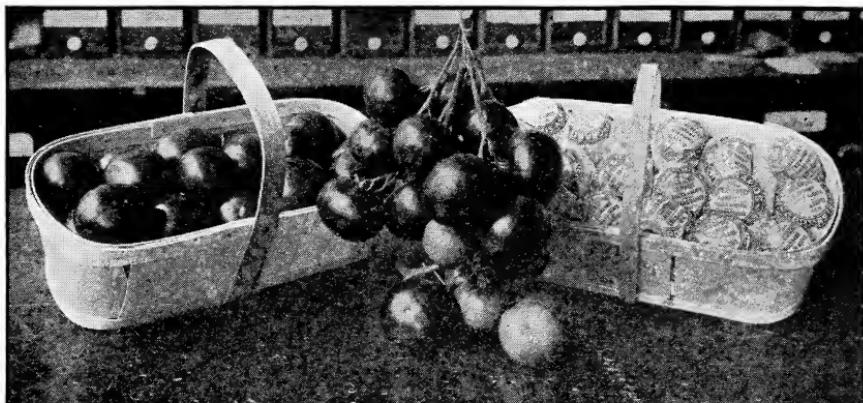
Every one admires a well kept lawn, and such a lawn adds much to beautifying a home.

We are glad to say that Grand Rapids is a city of beautiful home lawns, and we call your attention to the pictures in our catalogue which are very good types of attractive lawns, and show what careful attention and practical application of fertilizer and good grass seeds will do.

It is very important to first thoroughly neutralize the top soil with an application of agricultural lime and then enrich the dirt with good Pulverized Manure or Commercial Fertilizer; and this is equally essential when building a lawn by seeding or putting on sod. Much foreign grasses, weeds, etc., get into a lawn by using barnyard manure; this is eliminated by using either Commercial Fertilizer or Pulverized Manure, both of these we recommend to you.

We have a combination of grass seed, especially adapted for shady lawns, and would like to have you try it. Ask for our "Shady Lawn Grass Seed."

GRAND RAPIDS FORCING TOMATOES



This is the way we pack our Hot-house Tomatoes, ready for shipment. Notice the cluster which shows twenty-one tomatoes (a very good yield). Each basket contains 7 lbs. net, and is convenient for the consumer.

We supply this seed to Hot-house Gardeners throughout the United States.

The Grand Rapids Forcing Tomato was originated by the late John Wierenga of this city, and was first grown commercially in Grand Rapids greenhouses in 1916.

Our seed is carefully selected each year from the best fruits, greenhouse grown, and we take pleasure in recommending this seed to you.

PRICES

$\frac{1}{4}$ oz. via prepaid mail	\$1.75
1 oz. via prepaid mail	5.00

CARROTS

Good, sandy loam is best adapted for carrots of all varieties. The shorter varieties, however, can be sown on heavier lands, with good results. For garden, sow the early and short varieties at any time after April 1st, and repeat often for a succession of tender roots. For general crop sow in the open field about April 1st, using four to six pounds per acre for rows sixteen to twenty inches apart. While you get a good uniform root by thinning the young plants, it is not necessary to do so to get a crop of good, average carrots. Keep the soil hoed and the crop growing rapidly. No bugs or blights affect carrots, and every garden needs some.



Chantenay

An excellent half-long variety and one of the best in quality for the home garden. The roots are $5\frac{1}{2}$ in. long, stump rooted, and a deep orange-red in color. Good for bunching and selling on the market.

GOLDEN WAX BEANS



The above cut shows a sample of our Golden Wax Beans. These are a bush variety and are easily grown.

CABBAGES



Copenhagen Market

Good cabbages are to be had at all seasons of the year in some parts of the United States.

Copenhagen Market is undoubtedly the best cabbage for all conditions; grand for market gardening, and not equalled for home gardening. The heads are good, medium-sized, firm and round. The variety is a sure header, which is worth a lot. After once planting this variety you would not change for any other.

Never let the plants get checked by drouth. Cabbages require considerable moisture, but too much water causes them to rot very readily.

SWEET OR SUGAR CORN

For table use, the Sweet Corns are far and away ahead of all other varieties. While they cannot be planted quite as early as the first of Field Corns, their quality is so superior that no garden should be without a good planting of early and late varieties. Good prices can always be obtained. The crop is very profitable for the market gardener.

EARLY VARIETIES

Golden Bantam—A true Sweet Corn and the finest in quality of all. Being of dwarf growth it can be planted closely, producing small, yellow ears of delicious flavor. The earliest Sweet Corn and extremely hardy. Jobbing price per lb., 23c; 1 lb., 30c.

Stowell's Evergreen—The standard late or main crop variety and very fine in every way. It produces large ears which remain in marketable condition longer than any other variety. It is a valuable variety to plant for stock feeding, the fodder as well as the grain being very nutritious and relished by stock. Jobbing price per lb., 23c; 1 lb., 30c.

Black Mexican—This is an old variety, but one of high quality. The grain when ripe is a bluish-black, but in the green state is almost the same color as other corns. Jobbing price per lb., 20c; 1 lb., 30c.

Crosby's Early—Quite a good size, the ears being about six inches long with fourteen or more rows. Largely used for canning and is satisfactory in every way. Jobbing price per lb., 23c; 1 lb., 30c.

MAIN CROP VARIETIES

Early Evergreen—This is similar to Stowell's Evergreen, except that it is almost two weeks earlier and the ears are slightly smaller. It is of very high quality and is valuable as a second early or main crop variety. Jobbing price, per lb., 23c; 1 lb., 30c.

Country Gentleman—Wonderfully popular on account of its high quality. It has small deep grains in uneven rows. The ears are of good size, usually two and even three to a stalk. A little earlier than Stowell's Evergreen. Jobbing price, per lb., 23c; 1 lb., 30c.

Mammoth White Cory—A standard extra early variety producing fair-sized ears of good quality. Jobbing price, per lb., 23c; 1 lb., 30c.

Early Minnesota—Stalks about five feet high, ears long, and eight-rowed. Between Crosby's and Cory's in earliness. Jobbing price, per lb., 20c; 1 lb., 30c.

Howling Mob—Ohio Grown Seed. Jobbing price, per lb., 23c; 1 lb., 30c.

EGG PLANT

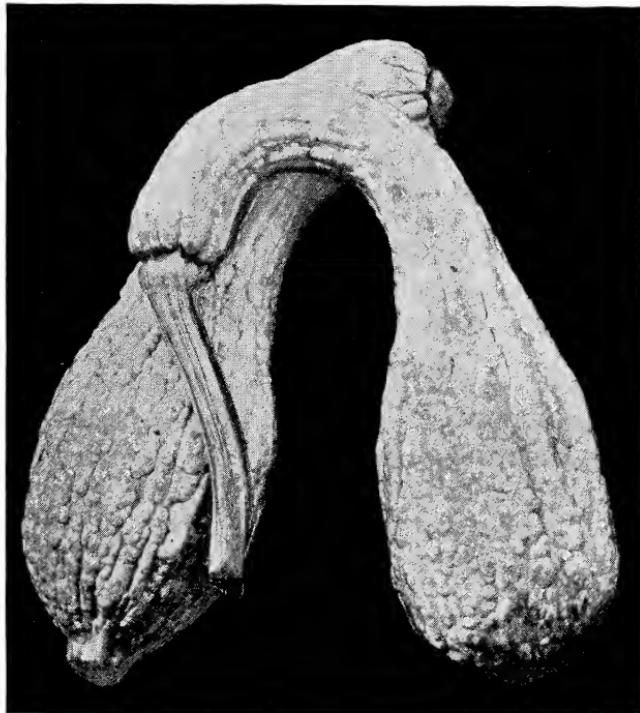


Large Purple Egg Plant

The cut shows the improved Large Purple variety of Egg Plant, the principal market variety grown around Grand Rapids.

The seed germinates slowly and should be started under glass, with moderately high temperature, about March 1st. When about 3 inches high, transplant carefully to the garden or field, but not until all danger of frost is over. Egg Plant flourishes in most of this state and wherever there is a good warm growing season. The plant bears most vigorously.

SQUASH



Summer Crookneck Squash

This well-known summer variety is bright golden yellow; skin very much warted; very fine and tender.

SQUASH

GENERAL DIRECTIONS FOR PLANTING

If you have six hills of bush squashes you will get all you require for a family. The squashes keep coming one after the other during the entire summer.

Don't set them out too early. Wait until thoroughly warm and frost-less weather has come.



Hubbard Squash

Put a spadeful of well-rotted manure in each hill and dig it in well. Sow 8 or 10 seeds in a diameter of a foot and later thin to the best 3 plants. Bush squashes should be in hills 4 ft. apart; use 4 oz. of seed to 100 hills.

Winter varieties with long vines should be planted in hills 6x8 feet apart; 8 oz. of seed will plant 100 hills; 2 to 3 lbs. per acre. The winter squashes do not mature until late in the fall, and having a very firm, hard shell, keep well, and with a little care, squashes can be had all winter and until late in the spring. In gathering winter squashes, it is important to keep the stems from being broken off.

The above cut shows the most popular and widely used variety of winter squash. It is dark green in color and is remarkable for its keeping qualities.

FLOWER SEEDS

There are no more satisfactory flowers than those grown from seed, especially the easily grown and brilliant flowered annuals. The beautiful shrubs and lilies have their place, but are far more expensive than a paper of seeds which will furnish a large number of plants usually enough for one's garden and some to spare.

Aim to have your garden with some flowers in bloom at all times and with colors which harmonize, also with plants in size, grading from dwarf borders to the bedding annuals and then to the taller plants which usually should stand next to the house or other confines of the garden or lawn.

A garden, carefully thought out and planned gives very much more pleasure than a haphazard one.

We wish you success.

	Per Oz.
Alyssum, Sweet	\$.30
Aster—Finest Mixed.....	2.00
Aster—Giant Crego, pink.....	2.00
Aster—Giant Crego, white.....	2.00
Aster—Victor	2.00
Candytuft .....	.20
Carnation—Marguerite	2.00
Castor Beans .....	.20
Cosmos .....	.50
Forget-Me-Not, blue	1.00
Gourds .....	.30
Hollyhocks	2.00
Mignonette—Machet	1.00
Mignonette—Sweet .....	.20
Morning Glory .....	.30
Nasturtium—Dwarf .....	.20
Nasturtium—Tall .....	.20
Pansy—Giant Mixed	2.00
Poppy—Carnation .....	.30
Poppy—Shirley .....	.50
Scarlet Runner .....	.30
Sunflower—Double Chrysanthemum	1.00
Sweet Peas .....	.30
Verbena	2.00
Wild Cucumbers .....	.20
Zinnia, mixed .....	.80

PLANTS

Get Your Plants from Headquarters.

PRICES	Per Box	Crated for shipment
Tomato Plants. About 150 plants to a box.....	\$1.00	\$1.10
Cabbage Plants. About 150 plants to a box.....	1.00	1.10
Pepper Plants. About 100 plants to a box.....	1.00	1.10
Egg Plant Plants. About 100 plants to a box.....	1.25	1.35
Cauliflower Plants. About 100 plants to a box.....	1.00	1.10
Celery Plants. About 100-125 plants to a box.....	1.00	1.10
Aster Plants. About 100 plants to a box.....	1.00	1.10
Salvia Plants. About 100 plants to a box.....	1.25	1.35
Pansy Plants. About 50-60 plants to a box.....	1.25	1.35
Bellis Perennis (Hardy Daisy). About 100 plants to a box.....	1.25	1.35
Sweet Potato Plants. About 200 plants to a basket.....	1.00	1.10
Potted Geraniums. Price per dozen, \$1.25-\$2.50, \$1.35 to \$2.60		

Unless otherwise instructed we ship plants by freight at buyer's risk. We simply get a receipt in good order from transportation company, when our responsibility ceases.

FIELD SEEDS

The following prices on Field Seeds are our ideas when going to press, and are subject to change without notice.

Field Seeds are very high in price and it is very important that you buy the very best obtainable. These are the kind we offer to you.

Call and see us.

Timothy , per 100 lbs.....	\$14.00
Mammoth Clover , per 100 lbs.....	58.00
Medium Clover , per 100 lbs.....	58.00
Alsike , per 100 lbs.....	57.00
Alfalfa , per 100 lbs.....	45.00
Winter, or Sand Vetch	Ask for prices.
Millet	Ask for prices.
Barley	Ask for prices.
Field Peas	Ask for prices

SEED POTATOES

Carefully Selected for Seed Purposes.

VARIETIES FOR EARLY PLANTING

Early Rose—This old-time variety is still very popular. It is a long Potato and pink in color at the bud end. Grows to a good size, yields well and is of fine quality. Northern Grown Seed. \$1.50 per pk. or 15 lbs. \$4.00 per bu. or 60 lbs. \$8.00 per 10 pks. or 150 lbs.

Early Ohio—A standard early Potato and a good one. Does well in all soils; is very early, oval in shape, has pink skin and shallow eyes. It is a splendid keeper and is very largely planted in the South for shipping to Northern markets. Northern Grown Seed. \$1.50 per pk. or 15 lbs. \$4.00 per bu. or 60 lbs. \$8.00 per 10 pks. or 150 lbs.

SELECTED LATE VARIETIES

Irish Cobbler—A large Potato and a heavy yielder. Tubers round and slightly flattened; flesh white and cooks dry and floury. It is very popular in this section, both for early and late planting. The vines are vigorous and make a healthy growth, and we advise early orders to insure their being filled in full. Northern Grown Seed. \$1.50 per pk. or 15 lbs. \$4.00 per bu. or 60 lbs. \$8.00 per 10 pks. or 150 lbs.

Petoskey—This Potato, which is one of the white varieties, is almost similar to the Cobbler, differing from it only in a slight degree. Quite a number of farmers and gardeners here have been growing this potato instead of the Cobbler, claiming for it advantages which they did not get from the Cobbler. Its shape is similar to the Cobbler, and it matures practically at the same time, only a trifle later. It is used to a large extent, both for first and second crop planting with equal success. It doesn't blight and does not become hollow with large growth, as does the Cobbler sometimes. The skin is smooth, eyes comparatively deep, and almost round in shape. For small gardens, we recommend it. Northern Grown Seed. \$1.50 per pk. or 15 lbs. \$4.00 per bu. or 60 lbs. \$8.00 per 10 pks. or 150 lbs.

Prices f. o. b. Grand Rapids, and subject to change.

ASPARAGUS

	Jobbing Per Lb.	Per Oz.
Palmetto	\$.60	\$.10

BEANS

	Jobbing Per Lb.	Per Lb.
Burpee's Improved Bush Lima	\$.30	\$.40
Burpee's Stringless .....	.25	.35
Challenge Black Wax Beans .....	.25	.35
Currie's Rust Proof Wax .....	.25	.35
Davis White Wax .....	.30	.40
Dutch Case Knife .....	.25	.35
Dwarf Early Black Wax .....	.25	.35
Fordhook Bush Lima .....	.25	.35
Golden Wax .....	.30	.40
Kentucky Wonder .....	.30	.40
King of the Garden Lima .....	.30	.40
Pencil Pod Black Wax .....	.30	.40
Refugee, or 1000 to 1 .....	.25	.30
Ward Kidney Beans .....	.25	.35

BEETS

	Jobbing Per Lb.	Per Oz.
Crosby's Egyptian	\$1.25	\$.15
Detroit Dark Red	1.25	.15
Early Blood Turnip	1.25	.15
Early Eclipse	1.25	.15
Early Egyptian Blood Turnip	1.25	.15
Long Dark Blood	1.25	.15

MANGELS AND SUGAR BEETS

	Jobbing Per Lb.	Per Oz.
Giant Feeding Sugar, or Half Sugar Mangel	\$1.00	\$.15
Golden Tankard	1.00	.15
Lane's Imperial	1.00	.15
Mammoth Long Red	1.00	.15

BRUSSELS SPROUTS

	Jobbing Per Lb.	Per Oz.
Carter's Perfection	\$3.00	\$.25

CABBAGE

	Jobbing Per Lb.	Per Oz.
All Head Early	\$ 5.00	\$.50
All Seasons	5.00	.50
Charleston, or Large Wakefield	7.00	.60
Copenhagen Market	10.00	.80
Early Jersey Wakefield	10.00	.80
Early Winningstadt	10.00	.80
Henderson's Early Summer	8.00	.70
Hollander, or Danish Ball Head	13.00	.90
Mammoth Rock Red	10.00	.80
Premium Flat Dutch	8.00	.70

CARROTS

	Jobbing Per Lb.	Per Oz.
Chantenay	\$1.00	\$.15
Danver's Half Long	1.00	.15
Improved Long Orange	1.00	.15
Oxheart	1.00	.15
Short Horn	1.00	.15
White Belgian .....	.80	.15
Yellow Belgian .....	.80	.15

CAULIFLOWER

	Jobbing Per Oz.	Per $\frac{1}{4}$ Oz.
Early Snowball	\$3.00	\$1.50

CELERY

	Jobbing Per Lb.	Per Oz.
Giant Pascal	\$3.00	\$.25
Golden Self-Blanching	8.00	.70
Soup, or Cutting	1.00	.10
White Plume	4.00	.30
Winter Queen	3.00	.25

CORN SALAD

	Jobbing Per Lb.	Per Oz.
Large Leaf	\$1.00	\$.10

CRESS OR PEPPERGRASS

	Jobbing Per Lb.	Per Oz.
Extra Curled	\$1.50	\$.20

CUCUMBERS

	Jobbing Per Lb.	Per Oz.
Arlington White Spine	\$1.00	\$.10
Boston Pickling	1.00	.10
Chicago Pickling	1.00	.10
Davis' Perfect	1.50	.15
Early Fortune	1.50	.15
Early Green Cluster.....	1.00	.10
Improved White Spine	1.00	.10

SPECIAL

Grand Rapids Forcing (for hot-houses) prepaid mail,	per oz.	\$10.00
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EGG PLANT

	Jobbing Per Lb.	Per Oz.
Black Beauty	\$6.00	\$.70
New York Purple	6.00	.70

ENDIVE

	Jobbing Per Lb.	Per Oz.
Broad Leaf Batavian	\$1.25	\$.15
Large Green Curled	1.25	.15
Moss Curled	1.25	.15

KALE OR BORECOLE

	Jobbing Per Lb.	Per Oz.
Dwarf Scotch	\$2.00	\$.25

KOHL RABI

	Jobbing Per Lb.	Per Oz.
Early White Vienna	\$3.00	\$.25

LEEK

	Jobbing Per Lb.	Per Oz.
American Flag	\$2.50	\$.25

LETTUCE

	Jobbing Per Lb.	Per Oz.
Big Boston	\$1.50	\$.15
Early Prize Head	1.50	.15
Grand Rapids Forcing (special).....	1.25	.15
May King	1.25	.15
Simpson's Early Curled	1.25	.15
Unrivaled	1.25	.15

MUSKMELON

	Jobbing Per Lb.	Per Oz.
Emerald Gem	\$1.25	\$.15
Extra Early Hackensack.....	1.25	.15
Grand Rapids Early Market	1.25	.15
Large Hackensack	1.25	.15
Rocky Ford, or Netted Gem.....	1.25	.15

WATERMELON

	Jobbing Per Lb.	Per Oz.
Cole's Early	\$.80	\$.10
Kleckley's Sweet, or Monte Cristo.....	.80	.10
Peerless, or Ice Cream.....	.80	.10

Mustard

	Jobbing Per Lb.	Per Oz.
White London	\$.80	\$.10

ONIONS

	Jobbing Per Lb.	Per Oz.
Australian Brown	\$2.25	\$.30
Ohio Yellow Globe	2.25	.30
Prizetaker	2.50	.40
Red Weathersfield	2.25	.30
Southport Red Globe.....	2.50	.40
Southport White Globe	2.75	.40
Southport Yellow Globe	2.25	.30
White Portugal	2.75	.40
Yellow Globe Danvers	2.00	.20

PARSLEY

	Jobbing Per Lb.	Per Oz.
Champion Moss Curled.....	\$1.00	\$.15

PARSNIPS

	Jobbing Per Lb.	Per Oz.
Hollow Crown	\$1.00	\$.15

PEAS

	Jobbing Per Lb.	Per Lb.
Alaska, or Earliest of All.....	\$.20	\$.40
Alderman .....	.30	.40
American Wonder .....	.30	.40
Champion of England .....	.30	.40
Dwarf Gray Sugar .....	.25	.40
Bliss Everbearing .....	.30	.40
Large White Marrowfat .....	.25	.40
Little Gem .....	.30	.40
Telephone .....	.30	.40
Thomas Laxton .....	.30	.40

PEPPER

	Jobbing Per Lb.	Per Oz.
Large Bell, or Bull Nose	\$8.00	\$.70
Ruby King	8.00	.70
Schell's New Quality	9.00	.80

PUMPKIN

	Jobbing Per Lb.	Per Oz.
Connecticut Field	\$.90	\$.10
King of Mammoth	1.25	.15
Large Cheese, or Kentucky Field .....	.90	.10
Sugar, or Pie	1.00	.15

RADISH

	Jobbing Per Lb.	Per Oz.
China Rose Winter	\$1.25	\$.15
Cooper's Sparkler	1.25	.15
Early Scarlet Turnip	1.25	.15
French Breakfast Turnip	1.25	.15
Grand Rapids Forcing (special)	2.00	.20
Icicle	1.25	.15
Improved Chartier	1.25	.15
Long Black Spanish	1.25	.15
Long Scarlet Short Top	1.25	.15
Round Black Spanish	1.25	.15
Vick's Early Scarlet Globe	1.25	.15
White Bottom	1.25	.15

RHUBARB OR PIE PLANT

	Jobbing Per Lb.	Per Oz.
Victoria	\$2.00	\$.20

RUTABAGA

	Jobbing Per Lb.	Per Oz.
Improved American Purple Top Yellow	\$2.00	\$.20

SALSIFY OR VEGETABLE OYSTER

	Jobbing Per Lb.	Per Oz.
Mammoth Sandwich Island	\$2.50	\$.30

SPINACH

	Jobbing Per Lb.	Per Oz.
Bloomsdale	\$1.00	\$.15
Long Standing	1.00	.15
Thick Leaved	1.00	.15

SQUASH

	Jobbing Per Lb.	Per Oz.
Chicago Warty Hubbard	\$1.50	\$.20
Early White Bush Scallop	1.25	.15
Early Yellow Bush Scallop	1.25	.15
Golden Hubbard	1.50	.20
Summer Crookneck	1.25	.15
True Hubbard	1.50	.20

SWISS CHARD

	Jobbing Per Lb.	Per Oz.
Swiss Chard	\$1.50	\$.20

TOMATOES

	Jobbing Per Lb.	Per Oz.
Bonnie Best	\$3.50	\$.40
Chalk's Early Jewell	3.50	.40
Dwarf Stone	3.50	.40
Earliana	3.50	.40
Early Michigan	3.50	.40
Grand Rapids Forcing (special)	\$5.00 per oz.	
John Baer	4.00	.50
Ponderosa	5.00	.50
Red Rock	4.00	.50
Stone	3.00	.30

TURNIPS

	Jobbing Per Lb.	Per Oz.
Cow Horn	\$1.50	\$.20
Green Top Yellow Aberdeen	1.25	.15
Purple Top Strap Leaf	1.50	.20
Robertson's Golden Ball	1.25	.15
White Egg	1.25	.15
Yellow Globe	1.50	.20

TOBACCO

Pulverize the soil of the seed bed thoroughly. Sow seed as soon as danger of frost is over. When plants are 6 inches high, transplant into hills 4 to 5 feet apart each way and cultivate frequently. One ounce of seed will produce plants for an acre.

	Jobbing Per Lb.	Per Oz.
Connecticut Seed Leaf.....	\$4.00	\$.15

HERBS

	Jobbing Per Lb.	Per Oz.
Anise	\$1.25	\$.15
Caraway	1.00	.10
Dill	1.50	.15
Lavender	3.25	.30
Sage	5.00	.40
Summer Savory	2.25	.20
Thyme	4.00	.40

BIRD SEED

	Jobbing per 100 Lbs.	Per Lb.
Recleaned Canary	\$30.00	\$.35
Bird Rape Seed	20.00	.25
Lettuce	15.00	.20
Mixed Bird Seed.....	20.00	.25
Sunflower Seed (for Parrots).....	20.00	.25

PLANTING, MATURITY AND WEIGHT TABLE

This is for field planting, and where plants and roots are stated, it is necessary to have them ready before-hand. The third column indicates the distance that the plants should stand in the rows, and where seed is sown they should be thinned out to this distance. The fifth column indicates maturity from the time plants are planted in the field, or seed is sown in the field. Also note that the last column is the approximate weight of seeds and not products. Time of planting and maturity is for latitude of Louisville.

* Indicates that the crop can either be planted in the Spring or Fall; if in the Spring, February to April; in the Fall, August and September.

	Time to Sow or Plant	Distance of Rows Apart	Distance of Plants in Rows	Quantity to Sow or Plant per Acre	Ready to Use	Approximate Weight of Seeds per bu. in lbs.
Artichoke—Tubers	Apr.	2½ ft.	2 ft.	6 to 8 bu.	Sept. to Oct.	50
Asparagus—Seeds	Apr.	15 in.	4 to 6 in.	8 to 10 lbs.	3 years	60
Asparagus—Roots	Mar.	6 to 8 ft.	12 to 18 in.	4,000 to 7,000	2 years	.....
Beans—Dwarf	Apr. to Aug.	2½ ft.	4 to 6 in.	1½ bu.	8 weeks	60
Beans—Navy	May to June	2½ ft.	6 in.	¾ to 1 bu.	Winter	60
Beans—Soja	May to June	Broadcast	1 to 1½ bu.	Fall and winter	60	
Beans—Pole	May to June	4 ft.	½ to ⅔ bu.	10 weeks	60	
Beets—Table	Apr. to July	12 to 18 in.	3 ft.	1½ to 3 mo.	19½	19½
Beets—Sugar	Apr. to June	2½ to 3 ft.	4 in.	6 to 8 lbs.	Fall and winter	19½
Buckwheat	June to Aug.	Broadcast	6 to 8 in.	5 to 6 lbs.	Fall	50
Cabbage—Plants (early)	Apr.	30 in.	15 to 20 in.	10,000 to 14,000	June and July	54
Cabbage—Plants (late)	July to Aug.	3 ft.	2 ft.	7,260	Fall and winter	54
Carrot	Apr. to June	1 to 2 ft.	3 to 4 in.	3 to 4 lbs.	45 to 70 days	28
Cauliflower—Plants	Apr.	2½ ft.	2 ft.	8,000 to 10,000	3 months	54
Celeri—Plants	June to Aug.	3 to 4 ft.	6 to 9 in.	15,000 to 30,000	4 to 5 mo.	37
Clover—Red and Sapling	*Mar. to Sept.	Broadcast	Broadcast	8 to 10 lbs.	Next year	60
Clover—Alsike	*Mar. to Sept.	Broadcast	Broadcast	5 to 8 lbs.	Next year	60
Alfalfa	Mar. to Sept.	Broadcast	Broadcast	20 lbs.	Next year	60
Clover—Crimson	July to Sept.	Broadcast	Broadcast	12 to 15 lbs.	May 1	60
Corn—Garden	Apr. to July	3 to 3½ ft.	9 to 15 in.	4 to 6 qts.	2 to 3 mo.	44 to 50
Corn—Field (drills)	Apr. to July	3½ to 4 ft.	10 to 18 in.	6 to 8 qts.	3 to 4 mo.	56
Corn—Field (checked)	Apr. to July	3½ to 4 ft.	3½ to 4 ft.	4 qts.	3 to 4 mo.	56
Cucumber	Apr. to July	4 to 5 ft.	4 ft.	2 lbs.	2 to 2½ mo.	39
Egg Plant—Plants	May to June	3 ft.	2½ to 3 ft.	5,000 to 6,000	60 days	39
Endive	Aug.	18 in.	12 in.	4 to 5 lbs.	2 to 2½ mo.	26
Grass Seeds—(Light)	Apr. to Oct.	Broadcast	Broadcast	1½ to 2 lbs.	Next year	14

	Time to Sow or Plant	Distance of Rows Apart	Distance of Plants in Rows	Quantity to Sow or Plant per Acre	Ready to Use	Approximate Weight of Seeds per bu. in lbs.
Grass Seeds—(Lawn).....	Apr. to Oct.	Broadcast	Broadcast	80 to 100 lbs.	8 to 10 weeks	20
Horsradish—Roots	Mar.	2½ ft.	12 to 18 in.	12,000 to 15,000	6 to 8 mo.	56
Kale—Spring	Apr. to Sept.	Broadcast	Broadcast	6 to 8 lbs.	5 to 6 weeks	
Kohl Rabi—Plants.....	Apr.	1½ to 2 ft.	10 to 12 in.	21,000 to 34,000	2½ to 3 mo.	56
Lettuce—Plants	*Mar. to Sept.	12 to 15 in.	6 to 8 in.	40,000 to 80,000	1½ to 2 mo.	35
Melon—Muskm	May to July	4 to 6 ft.	4 to 6 ft.	2 lbs.	2½ to 3 mo.	32
Melon—Water	May to June	8 to 10 ft.	8 to 10 ft.	3 lbs.	3 months	35
Millet	May to July	Broadcast	Broadcast	1 bu.	6 to 7 weeks	50
Mustard	*Mar. to Apr.	Broadcast	Broadcast	4 to 5 lbs.	6 to 8 weeks	56
Oats—Spring	Apr.	Broadcast	Broadcast	1½ to 2 bu.	July 1	32
Onions—For large bulbs.....	Apr.	12 to 14 in.	.....	4 to 5 lbs.	July to Aug.	
Onions—For sets.....	Apr.	10 to 12 in.	.....	40 to 50 lbs.	July	39
Onion Sets	Apr.	12 in.	4 in.	15 to 16 bu.	June	32
Parsley	Mar. to Apr.	12 in.	.....	15 lbs.	July	42
Parsnips	Mar. to Apr.	18 in.	4 to 6 in.	5 to 7 lbs.	Fall and winter	18
Peas—Wrinkled	Apr. to May	2½ to 3 ft.	.....	1½ to 2 bu.	7 to 9 weeks	56
Pepper—Plants	May 15.	30 in.	15 to 18 in.	11,000 to 14,000	2 to 2½ mo.	28
Potatoes—(Early)	May and June	27 in.	10 to 12 in.	8 to 12 bu.	June to July	60
Potatoes—(Late)	July to Aug.	30 in.	15 to 18 in.	8 to 10 bu.	Oct.	60
Sweet Potato—Plants	May 15	3 ft.	20 to 24 in.	7,000 to 8,000	Sept. to winter	45
Pumpkin	May	8 to 10 ft.	8 to 10 ft.	2 lbs.	Fall	24
Radish	Apr. to Aug.	10 to 15 in.	3 in.	8 to 10 lbs.	24 to 40 days	56
Rape	*Apr. to Sept.	Broadcast	Broadcast	6 to 8 lbs.	6 to 8 weeks	56
Rhubarb—Roots	Apr. to Apr.	4 ft.	2 to 3 ft.	5,000 to 7,000	Next year	
Rye	Aug.	1½ to 2 ft.	Broadcast	1 to 2 bu.	April 20	56
Salsify	*Apr. to Sept.	4 ft.	Broadcast	6 to 8 lbs.	Fall and winter	18
Spinach—Early	May	6 to 8 ft.	3 ft.	15 to 20 lbs.	8 weeks	48
Squash—Spring	May to June	3 to 3½ ft.	3 ft.	3 lbs.	July	26
Squash—Winter	May to July	4 ft.	6 to 8 ft.	2 lbs.	Fall and winter	22
Tobacco—Plants	May to July	3 to 4 ft.	2½ to 3 ft.	4,800 to 5,000	Sept. to Oct.	35
Tomato—Plants	*Apr. to Sept.	Broadcast	Broadcast	2,700 to 3,600	July until frost	20
Turnip	Aug. to Oct.	Broadcast	Broadcast	1½ to 2 lbs.	1½ to 2 mo.	56
Vetch				50 lbs.	May	50

WIZARD

TRADE BRAND MARK

CONCENTRATED MANURES

Unequalled natural fertilizers for grains, grasses, fruits, vegetables, flowers and lawns.

Highly concentrated, effectually sterilized, uniform, safe and dependable for field, greenhouse or home fertilizing.

“WIZARD” PULVERIZED SHEEP MANURE

This concentrated pure animal manure is thoroughly pulverized and convenient for greenhouse use, gardens, and especially good for lawns, flower gardens, shrubs and bushes.

PRICES



5 lbs. in paper carton—O. C.....	\$.35
10 lbs. in paper carton—P. C.....	.60
25 lbs. in 25-lb. bag—C. Z.....	.70
50 lbs. in 50-lb. bag—E. C.....	1.25
100 lbs. in 100-lb. bag—N. K. Y.....	2.25
500 lbs. in 100-lb. bags—E. Y. X.....	10.00
1,000 lbs. in 100-lb. bags	18.00
2,000 lbs. in 100-lb. bags—P. O. Z. X.....	35.00

Ask us for carload prices delivered to your station.

“WIZARD” PULVERIZED CATTLE MANURE

The evaporating and grinding process used in preparing Pulverized Cattle Manures completely sterilizes and makes it free from weed seeds. We are pleased to recommend this manure to you for garden use.

PRICES

100 lbs. in 100-lb. bag	\$ 2.00
500 lbs. in 100-lb. bags	9.00
1,000 lbs. in 100-lb. bags—N. C. Y. X.....	17.00
2,000 lbs. in 100-lb. bags—O. E. Y. Z.....	32.00

Ask us for carload prices delivered to your station.



BETTER FARMING WITH DARLING'S ANIMAL MATTER FERTILIZERS

Every crop harvest removes from the soil a certain amount of plant food and if this is not replaced by equal quantity of such elements as Nitrogen, Phosphoric Acid, Potash, etc., the soil fertility cannot be maintained, and, in consequence, you have what is called a run-down farm.

DARLING'S
ANIMAL MATTER
FERTILIZERS
"Natures own Plant Food"



**"Increase the Yield
of every Field."**

This has been thoroughly demonstrated in the vegetables grown under glass; when, by applying the right kind of fertilizer, we grow four crops each year on the same soil, without rotation of crops, or turning under clover, etc.

A lack of Nitrogen is indicated by weak stalk growth, failure to start quickly, and a sickly, yellowish-green color of the leaves. Short strawed grain crops indicate a shortage of Nitrogen. Grain crops slow to ripen, and with heads not properly filled out, indicate that more Phosphoric Acid is needed. In gardening, failure of cabbage to harden the head, of cauliflower to make the button, of onions to ripen down, is often due to lack of Phosphoric Acid. Root crops are generally heavy feeders on Potash, as are also some other crops grown for their leaf, such as tobacco, etc. Sugar beets need Potash to set the sugar, potatoes to make the starch; and to get well filled and sturdy grain crops, Potash is essential.

Keep in mind, as well, the natural deficiencies of your soil. Peat and muck soils are strong in Nitrogen, but exceedingly weak in Phosphoric Acid and Potash. Clay soils are better supplied with plant food than sandy soils, but are colder, resulting in slower growth in the early spring, and have much of their plant food in unavailable forms.

Finally, favorable weather conditions throughout the growing season, we all agree, are essential. Without it, no soil will produce to its maximum; and its natural fertility, as well as the addition of plant food from Fertilizers, will be of no avail.

We handle Darling's Animal Matter Fertilizers—the best brand made today. Let us sell you in Darling's Fertilizer the plant food you are selling off the farm each year, in milk, butter, live stock, grain and vegetables. Increase your yields, which means bigger profits, and increase the fertility or producing power of your soil at the same time. This means a more valuable farm as each year goes by.

DARLING'S BIG HARVEST

	Per Cent
Ammonia (Animal Tankage).....	1.
Nitrogen (Animal Tankage).....	.82
Available Phosphoric Acid	8.
Insoluble Phosphoric Acid (Animal).....	2.
Potash	3.

PRICES

1 sack, 125 lbs., net.....	\$ 3.25
8 sacks, 1,000 lbs., net.....	23.00
16 sacks, 2,000 lbs., net.....	44.00

Ask us for prices on carloads, delivered your station.

We recommend this brand to all who wish a fertilizer for crops requiring considerable Phosphoric Acid and Potash.

DARLING'S GRAIN GROWER

	Per Cent
Ammonia (Animal Tankage)	1.
Nitrogen (Animal Tankage) .....	.82
Available Phosphoric Acid	9.
Insoluble Phosphoric Acid (Animal).....	2.
Potash	1.

PRICES

1 sack, 125 lbs.....	\$ 3.25
8 sacks, 1,000 lbs.....	22.00
16 sacks, 2,000 lbs.....	40.00

Ask us for prices on carloads, delivered your station.

DARLING'S SURE WINNER

	Per Cent
Ammonia (Animal Tankage).....	1.
Nitrogen (Animal Tankage) .....	.82
Available Phosphoric Acid	10.
Insoluble Phosphoric Acid (Animal).....	2.
Potash .....	.5

PRICES

1 sack, 125 lbs.....	\$ 3.25
8 sacks, 1,000 lbs.....	22.00
16 sacks, 2,000 lbs.....	40.00

Ask us for prices on carloads, delivered to your station.

DARLING'S BIG POTASH

We are again offering you a fertilizer containing a larger amount of Potash, and you can get this in buying Darling's Big Potash brand.

Available Phosphoric Acid..... 10. per cent
Potash 5. per cent

PRICES

1 sack, 125 lbs.....	\$ 3.25
8 sacks, 1,000 lbs.....	24.50
16 sacks, 2,000 lbs.....	47.00

GROUND LIME ROCK

The land in Kent County, in a majority of instances, needs neutralizing, and you can do this by using the raw lime rock. Most lawns would be greatly benefited by a liberal use of Ground Lime Rock.

PRICES

1 sack, 100 lbs.....	\$ 1.00
1 sack, 200 lbs.....	1.50
1,000 lbs., in sacks.....	5.00
2,000 lbs., in bulk.....	7.00

Bring your sacks and save this cost.

Special prices on carloads, delivered to your station.

ACID PHOSPHATE

Available Phosphoric Acid..... 16 per cent

We handle only the best grade of Acid Phosphate, and recommend this to you for either mixing or for grain. Much of the land in Kent County seems to require Acid Phosphate.

PRICES

1 sack, 125 lbs.....	\$ 2.50
8 sacks, 1,000 lbs.....	16.00
16 sacks, 2,000 lbs.....	30.00

NITRATE OF SODA

This is an imported article, coming from South America, and we are headquarters for Western Michigan. Get our prices on carloads, delivered to your station.

PRICES

1 sack, 200 lbs.....	\$11.00
5 sacks, 1,000 lbs.....	50.00
10 sacks, 2,000 lbs.....	90.00

Less than sack lots, 10c per lb.

GROUND ROCK PHOSPHATE

This product is the Rock Phosphate ground very fine, and 95 per cent will go through a 100 mesh screen, but the Phosphate Acid is not available until it has been properly treated; the usual method is to run it through the stable and out with the manure during the winter.

PRICES

1 sack, 80 lbs.	\$ 1.25
12 sacks, 1,000 lbs.	12.00
25 sacks, 2,000 lbs.	20.00

DARLING'S STEAMED GROUND BONE

Per Cent

Ammonia	2.25
Nitrogen	1.85
Phosphoric Acid	28.

The large amount of available Phosphoric Acid in Steamed Ground Bone makes it very desirable for greenhouse purposes and for the fact that it is wholly animal matter, it is used by florists for the treatment of lawns, roses and shrubbery.

PRICES

1 sack, 125 lbs.	\$ 3.50
8 sacks, 1,000 lbs.	25.00
16 sacks, 2,000 lbs.	49.00

Ask us for carload price, delivered your station.

DARLING'S FARMERS' FAVORITE

Per Cent

Ammonia (Animal Tankage)	3.
Nitrogen (Animal Tankage)	2.47
Available Phosphoric Acid	8.
Insoluble Phosphoric Acid (Animal)	2.
Potash	1.

PRICES

1 sack, 125 lbs., net	\$ 3.50
8 sacks, 1,000 lbs., net	26.00
16 sacks, 2,000 lbs., net	50.00

Ask us for prices on carloads, delivered your station.

This is the best all-around fertilizer that we have to offer, and is certainly the "Farmers' Favorite." Well-balanced, high grade.

GROUND BONE AND ACID PHOSPHATE

We are pleased to call your attention to a combination that will fill a long felt want, and give you much satisfaction.

Half and Half, Bone and Acid Phosphate; available Phosphoric Acid, 23 per cent.

PRICES

1 sack, 125 lbs.....	.....\$ 3.25
8 sacks, 1,000 lbs.....	..... 24.00
16 sacks, 2,000 lbs.....	..... 45.00

“Darling’s Brands Are Pure”

HOME MIXING OF FERTILIZER

The purchase of straight fertilizer materials for Home Mixing is not a new proposition, but it is only within the last few years that the practice has become general.

Nitrate of Soda is the most available source of nitrogen or ammonia. The ammonia of nitrogen in Nitrate of Soda is in nitrate form and is immediately and all available.

Acid Phosphate is the most common source of Phosphoric Acid for Home Mixing. Our Acid Phosphate is of the highest degree of availability and in excellent mechanical condition.

Muriate of Potash is the main source of supply for potash for all commercial fertilizers on the market and contains 48 to 50 per cent of actual potash. It is the one grade of potash in general use.

Kainit (12 per cent actual Potash) is also used for home mixing. On light soils its effects are beneficial.

On Page 34 is a Home Mixing Table from which any desired analysis can be obtained.

HOME MIXERS' FERTILIZER TABLE

Any Formula at a Glance.

Exact number of pounds of each material required for the equivalent of 2,000 lbs. of Ready Mixed Fertilizer of analysis desired.

Percent- ages or Units Desired	Ammonia from Nitrate of Soda	Available Phosphoric Acid		Actual Potash from Muriate of Potash	Potash from Kainit 12%
		From 14% Acid Phos- phate	From 16% Acid Phos- phate		
1	110	143	125	40	166
2	220	286	250	80	333
3	330	429	375	120	500
4	*440	571	500	160	667
5	550	714	625	200	833
6	660	*857	750	240	1000
7	770	1000	875	280	1167
8	880	1143	1000	320	1333
9	990	1286	1125	360	1500
10	1100	1429	1250	*400	1667
11	1210	1571	1375	440	1833
12	1320	1714	1500	480	2000

Example: To make a fertilizer containing 4 per cent Ammonia, 6 per cent available Phosphoric Acid, 10 per cent Potash. By looking in the percentage column for 4 per cent and in the Nitrate column we find 440 lbs., in the 16 per cent Acid Phosphate column opposite 6 per cent we find 750 lbs., and in the Muriate of Potash column opposite 10 per cent we find 420 lbs.; the sum of the 440 lbs., 750 lbs., and 420 lbs. is 1,610 lbs., which is equivalent to and contains the same amount of Plant food as 2,000 lbs. of the 4-6-10 manufactured fertilizer.

Any combination can be figured in the same way.

GLIDDEN DRY BORDEAUX MIXTURE

Glidden Dry Powdered Bordeaux Mixture can be used wherever paste Bordeaux Mixture has been used heretofore. It is splendidly adapted for both fruit tree and truck crop work, and can be used in combination with and of GLIDDEN'S insecticides, either as a dry or as a liquid spray.

Six and three-quarters pounds of powdered Bordeaux Mixture to 50 gallons of water will make a solution of strength equal to a 4-4-50 mixture.

	PRICES	Jobbing	Lb.
1-lb. package		\$.42	.45
5-lb. package .....		.37	.40
10-lb. drum .....		.33	.35
25-lb. drum .....		.30	.33
50-lb. drum .....		.28	.30
100-lb. drum .....		.27	.30
200-lb. drum .....		.26	.28

Prices subject to change without notice.

ARSENATE OF LEAD

Paste—An arsenical poison that destroys external leaf-eating insects such as Coddling Moth, Potato Bug, Curculio, etc. It should be used in the proportion of 2 to 3 lbs. to 50 gallons of water.

	PRICES	Jobbing	Lb.
1-lb. cans		\$.25	.30
5-lb. steel kegs .....		.21	.25
10-lb. steel kegs .....		.20	.25
25-lb. steel kegs .....		.19	.23
50-lb. steel kegs .....		.18	.20
100-lb. steel kegs .....		.17	.19

Prices subject to change without notice.

Powder—One to 1½ lbs. of this fluffy powder, mixed with 50 gallons of water makes the most effective solution for liquid spraying. This product is also excellent for dusting.

	PRICES	Jobbing	Lb.
1-lb. package		\$.48	.50
5-lb. package .....		.43	.45
10-lb. drums .....		.39	.40
25-lb. drums .....		.36	.38
50-lb. drums .....		.34	.35
100-lb. drums .....		.33	.35
200-lb. drums .....		.32	.34

Prices subject to change without notice.

PURE PARIS GREEN

We carry in stock strictly pure Paris Green of the very best quality and it is known for its effectiveness.

PRICES	Jobbing	Lb.
1/4-lb. packages	\$.54	\$.60
1/2-lb. packages .....	.52	.60
1-lb. packages .....	.50	.60
2-lb. packages .....	.48	.55
5-lb. packages .....	.48	.50
14-lb. drums .....	.47	.50
28-lb. drums .....	.47	.50
56-lb. drums .....	.47	.50
100-lb. drums .....	.46	.48
300-lb. kegs .....	.44	.45

Prices are subject to change without notice.

GLIDDEN ARSENATE OF CALCIUM

This product is virtually as effective as Arsenate of Lead and excellent results have been obtained with it, yet it is more economical than either Arsenate of Lead or Paris Green.

It is especially recommended for use on seed fruits, such as Apples, Pears and Quinces, but on tender foliage such as that of the Peach and Japanese Plum, it is apt to cause burning.

Glidden Arsenate of Calcium is a very satisfactory material for spraying potatoes, and is cheaper than Paris Green for this purpose.

Directions for Use.

When used with Bordeaux Mixture or Lime-Sulphur, use $\frac{3}{4}$ to 1 lb. to 50 gallons of solution. When used alone, use $\frac{3}{4}$ to 1 lb. to 50 gallons of water, adding 2 or 3 pounds of good slacked lime. For dusting, mix with one or two parts of gypsum or lime.

PRICES	Jobbing	Lb.
1-lb. package	\$.42	\$.45
5-lb. package .....	.37	.40
10-lb. drum .....	.33	.35
25-lb. drum .....	.30	.34
50-lb. drum .....	.28	.30
100-lb. drum .....	.27	.30
200-lb. drum .....	.26	.28

Prices subject to change without notice.

GLIDDEN DRY POWDERED BORDO-ARSENATE

This is an efficient combined Insecticide and Fungicide that possesses the killing properties of Arsenate of Lead and the fungus preventative qualities of Bordeaux Mixture. It will control both external leaf-eating insects and fungus disease at the same time.

Use 6½ lbs. of this product to 50 gallons of water and it will produce a spray equal in Bordeaux strength to the 4-4-50 formula used generally for controlling fungus diseases. It will contain 1½ lbs. of Arsenate of Lead which will control most leaf-eating pests.

	PRICES	Jobbing	Lb.
1-lb. cartons	\$.64	\$.65	
5-lb. cartons .....	.51	.55	
10-lb. drums .....	.40	.45	
25-lb. drums .....	.36	.40	
50-lb. drums .....	.33	.35	
100-lb. drums .....	.30	.32	
200-lb. drums .....	.28	.30	

Prices subject to change without notice.

DRY LIME SULPHUR

Dry Lime Sulphur can be used for any purpose for which the Liquid Lime Sulphur Solution has been used in the past.

To prepare it for the spray, it is only necessary to add water. This mixing can be done right in the tank in any kind of weather, thus insuring a great saving in time and material for the consumer, both large and small.

	PRICES	Jobbing	
5-lb. drums	SZ	\$1.00	
10-lb. drums	NKZ	1.80	
25-lb. drums	POC	3.75	

COPPER SULPHATE OR BLUE VITRIOL

We are headquarters for Copper Sulphate, and are in position to supply it either wholesale or retail.

If you use Copper Sulphate let us hear from you.

Guaranteed 99 per cent pure. Large blue crystals.

PRICES

Barrel lots, about 400 lbs.....	18c per lb.
Less than barrel lots.....	15c per lb.

RED SNAPPER PLANT FOOD AND SOAP

A rich and nutritious fertilizer for House Plants and Flower Gardens. Made from thoroughly sterilized, completely aerated, steam dried fish bones and nitrogenous cartilage, together with pulverized tobacco stems. Is clean and sanitary.

Food—small package	25 cents
Food—large package .....	.50 cents
Soap .....	.25 cents

Red Snapper Products are put up in cases as follows: Jobbing
price
per case

Plant Food—24 cans, 50c size.....	\$8.40
Plant Food—24 cans, 25c size.....	4.20
Plant Food—12½-lb. sacks (6 in crate).....	6.30
Plant Soap—24 cans, 25c size.....	4.20
Combination Case (6 50c-size Plant Food, 12 25c-size Plant Food, 6 25c-size Plant Soap).....	5.25

MISCELLANEOUS SUPPLIES

HAMMOND'S SLUG SHOT

This is a fine powder and is thoroughly reliable in killing cabbage worms, chicken lice, etc. Has been used since 1880, and trade marks registered.

PRICES

1-lb. packages	15c per pkg.
5-lb. packages .....	.50c per pkg.

QUANTITY PRICES

1-lb. packages, 4 doz. per case.....	C.XZ
5-lb. packages, per pkg. .....	.iy

FELIX GIRARD RAT AND MOUSE EMBALMER

This preparation has peculiar properties attractive to rats and mice. When used according to directions, it will thoroughly rid the worst infested premises in **one night without after-odors**. It contains no phosphorus, which is condemned by Government Experts on account of fire danger.

PRICES

Small package	\$1.00
1-lb. package	3.00

TREE TANGLEFOOT

Tree Tanglefoot is a sticky compound similar to that used in making Tanglefoot Fly Paper, and is especially adapted for protecting trees from the attack of climbing and creeping insects, particularly gypsy, brown-tail and tussock caterpillars, canker worms, climbing cut-worms and ants. On matured fruit trees and all shade trees it is applied directly to trunks, but on young trees we recommend application over strips of manila paper. Will not Injure Trees.

PRICES

1-lb. package	\$.50
3-lb. package	1.45
10-lb. package	4.50
20-lb. package	8.75
25-lb. package	10.50

CONKEY'S POULTRY REMEDIES

In order to raise poultry successfully you must be in position to combat disease as soon as it appears in the flock. Conkey's Remedies are standard and cannot be excelled.

PRICES

Roup Remedy	30c per package
Roup Remedy	60c per package
Roup Pills	30c per package
Cholera Remedy	30c per package
Gape Remedy	30c per package
White Diarrhoea Remedy	30c per package
White Diarrhoea Remedy	60c per package
Lice Powder	30c per package
Lice Powder	60c per package
Lice Liquid	50c per package
Head Lice Ointment	15c per package
Lice Fix	30c per package
Poultry Tonic	30c per package
Poultry Tonic	60c per package
Noxicide Dip and Disinfectant	40c per package

MASTICA LIQUID GLAZING PUTTY

“Best for Glazing”

For glazing greenhouses, hot-beds, sash, etc. Better than putty. Does not crack. Always remains soft.

Price, per gallon.....\$2.65

THERMOMETERS

No. 2401. For greenhouse use, each.....15c

SCOLLAY'S PUTTY BULB

A useful tool for applying liquid putty in glazing greenhouses, etc.

Price, each\$1.25

SCOLLAY'S ANGLE NECK SPRINKLER

For sprinkling plants, flowers, clothes, etc.

Price, each\$1.25

WHALE OIL SOAP

A wash for foliage and trunks of plants and trees. Kills insects and eggs.
1 pound\$.25

CUT-WORM KILLER

1 pound\$.30

5 pounds1.25

TWINE

Jute, 2 and 3-ply, for tying up tomatoes, etc.

OC35c per lb.

POP CORN

Globe Shelled Rice Pop Corn.....12c per lb.

We carry in stock “Sure-to-Pop” Corn.

"BLACK LEAF 40"

This insecticide is a concentrated solution of Nicotine Sulphate, and guaranteed to contain not less than 40% nicotine by weight.

Complete directions for use are printed on each package, but the following general directions are recommended:

For Spraying Purposes—"Black Leaf 40" is highly recommended by Experiment Stations and by Spraying Experts throughout the entire United States and the Dominion of Canada.

"Black Leaf 40" is perfectly soluble in water; no clogging of nozzles.

One part of "Black Leaf 40" is usually diluted as follows: With about 800 parts of water for Black Aphis and Woolly Aphis; with about 1,000 parts of water for Green Aphis, Rosy Aphis, Pear Psyllis, etc.; with about 1,200 parts of water for Onion Thrips and with about 1,600 parts of water for Grape Leaf-Hopper; when prepared according to the directions on the labels. Owing to the large dilution, neither foliage nor fruit is stained.



If desired, "Black Leaf 40" may be used in combination with Arsenate of Lead, Lime-Sulphur, and Bordeaux Mixture—thereby saving the labor expense of making separate applications. For more detailed information see our special spraying leaflets.

For Dipping Purposes—For dipping sheep and cattle to destroy scabies: The 10-lb. tin of "Black Leaf 40" will produce 960 gallons (U. S. Measure) of dipping solution. The resulting mixture contains fully "5/100 of 1% nicotine," the strength required by the U. S. Government in official dippings of sheep and cattle for scabies; for which purpose the U. S. Government permits only two classes of dips, namely, nicotine and lime-sulphur. However, lime-sulphur, although effective against scabies, does not destroy ticks and lice on sheep nor lice on cattle—whereas "Black Leaf 40" is effective against all of these pests when used per specific dipping directions on the labels.

"Non-Poisonous"—Diluted in accordance with directions, "Black Leaf 40" is classed as a non-poisonous dip to the animals specified.

"Black Leaf 40" does not stain nor injure wool at the dilution given. Owing to its concentrated nature, "Black Leaf 40" is especially desirable to

handle from the standpoint of transportation—one case of ten 10-lb. tins, gross weight less than 150 lbs., being sufficient to produce 9,600 gallons of Official Strength swim, for sheep and cattle scabies.

PRICES

10-lb. tins—NXOC	\$13.75 per tin
2-lb. tins—OCY	3.25 per tin
½-lb. tins—LC	1.00 per tin
1-oz. bottles—NS .....	.25 per bottle

“NICO-FUME”

All Hot-house growers are familiar with this well-known liquid insecticide.

“NICO-FUME” is a highly refined solution of “free” nicotine, guaranteed under the National Insecticide Act to contain 40 per cent of nicotine. For spraying, one or two teaspoonfuls to the gallon of water furnish an effective remedy against Green Aphis and Thrips; and for vaporizing, one-half ounce per 2,000 cubic feet furnishes a strong fumigation. “Nico-Fume” Liquid thus has the advantage of being employed both for spraying and for fumigating. The labels contain complete directions.

PRICES

8-lb. tins—NYEX	\$14.50 per tin
4-lb. tins—CKP	7.50 per tin
1-lb. tins—NCY	2.00 per tin
¼-lb. tins—CY .....	.65 per tin

Quantity prices are less NC%.

Complete directions for use are printed on each package.

THE SKINNER SYSTEM OF IRRIGATION

The Skinner System of Irrigation is so universally used and has given such wonderful results among our members as to need no extended description or recommendation. We are interested in bringing to your notice the more recent advances and improvements now offered.

After many years experimenting, the Skinner Irrigation Company have perfected a process of producing a complete irrigation system built to fit the plot on which it is to be used, and at prices which are bound to interest every progressive grower.



All the nozzle holes in each pipe are drilled and tapped at one operation, so that there is not the slightest variation in the throw of the nozzles; consequently, even watering is obtained over the whole field.

Of course, our association will carry in stock the various fittings for repairs or for occasional conditions which still demand them, but you will be making a mistake if you do not investigate these complete lines, which come all ready for erection, and which will save you a great deal of labor and insure you the best of equipment.

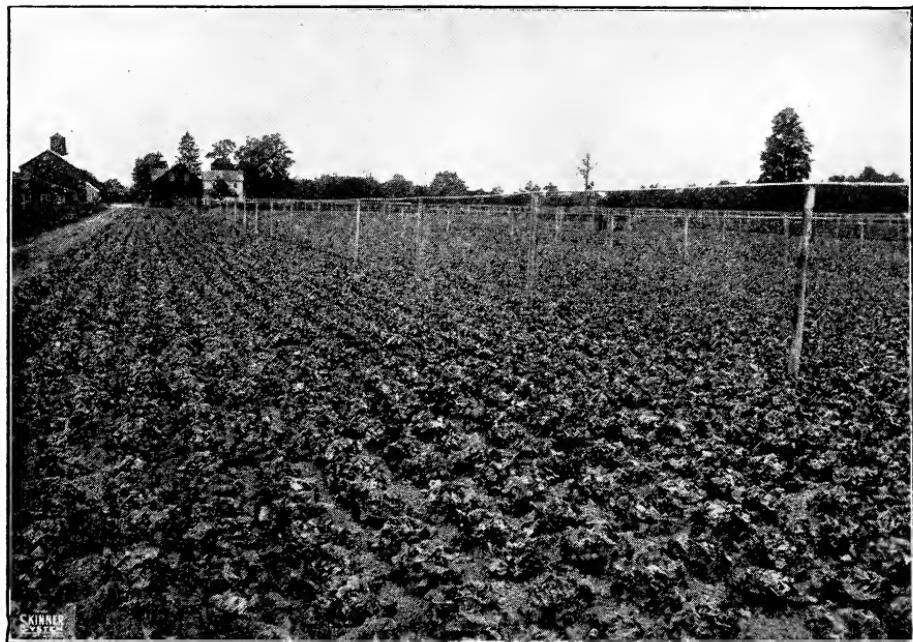
The Skinner System Standard Lines are built in 18-foot sections, connected with standard plumbers' couplings. These are recommended for large outdoor and for all greenhouse installation.

With each line is furnished a globe valve, flushing valve, turning union, roller bearing hangers for each 15 feet and nozzles for each 3 feet.

The Sectional Portable Lines, another new development, are just the same as the Standard Lines, except each section is equipped with the patented quick-acting coupling, by means of which the lines can be taken apart or put together in a few moment's time.

The only tool required is an ordinary monkey wrench and the best part is, that you can't put the lines together any way but right. No adjusting necessary; the nozzles are always in perfect alignment. You can easily think of what a convenience such a portable Skinner System would be in many places.

While Standard Stationary equipment is recommended for most installations of any size, yet a very real benefit in the Sectional Portable Lines



lies in the fact that a few lines can be made to water a considerable acreage. It is quite practical under many conditions to set up rows of posts at 50-foot intervals. Then the nozzle line can easily be shifted from one row of posts to another. An 18-foot section of $\frac{3}{4}$ -inch pipe weighs only about 20 pounds so it isn't much of a job. Many growers start in using the Skinner System this way.

On account of market conditions it is not possible to quote prices, but if you will let us know how many lines you want, and the length of each, or send us a sketch of your ground, a cost estimate will be supplied.

The Skinner Irrigation Company also have automatic line turning equipment that is a wonderful time-saver on out-door systems. It will pay you to investigate them, especially now that reliable help is so scarce and high-priced.

SKINNER IRRIGATION SUPPLIES

The Skinner System is the most improved method of irrigation, and is used outdoors on gardens, lawns, etc., as well as for greenhouse work. Write for booklet.

Model A Drilling Machine	\$11.70
Model B Drilling Machine	14.70
Large Tap Drills, 5/16—24 each .....	.35
Small Tap Drills, 12—24 each .....	.25
Silver Stream out-door Nozzles, each.....	.06
Silver Stream in-door Nozzles, each.....	.08 1/2
Greenhouse Nozzles, ST-50, 10 ft. throw, each.....	.09 1/2
Greenhouse Nozzles, ST-70, 12 1/2 ft. throw, each.....	.09 1/2

UNIONS

		Fittings	
		Tee	Cross
No. E—Inlet 1 in. Outlet 3/4 to 1 in.....	\$2.50	\$2.95	
No. N—Inlet 1 1/4 in. Outlet 1 1/4 in.....	3.50	3.75	
No. R—Inlet 1 1/2 in. Outlet 1 1/2 in.....	3.95	4.65	
No. S—Inlet 2 in. Outlet 2 in.....	4.85	5.85	

We would like to have you call and see us about this system. Tell us your plans. Our experience is at your service.

“NORCROSS” HAND CULTIVATORS AND WEEDERS

We handle the “Norcross,” a most complete garden hoe, and a modern type of hand cultivator.

PRICES

5-prong, 4-ft. handle, each.....	\$1.25
3-prong, 4-ft. handle, each.....	1.00
3-prong, “Midget,” 9-in. handle, each.....	.50



Quantity prices—
less NC%.

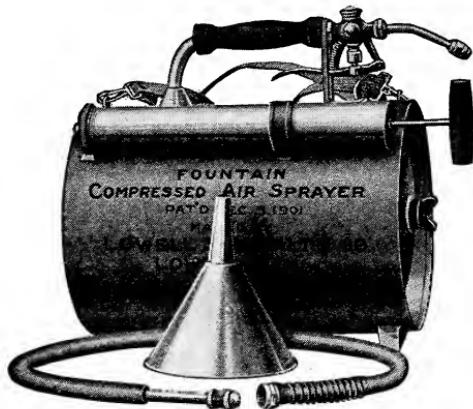
Special booklet on
request.



“LOWELL” GOODS OF QUALITY SPRAYERS

The Lowell Sprayers are used for disinfecting, whitewashing, window cleaning, automobiles, and for many other general purposes by the farmer, fruit grower and gardener.

We would be glad to have your inquiry, and to supply your wants.



PRICES

No. 110, Lowell Fountain Compressed Air Sprayer, capacity 3 gallons, galvanized steel, each	\$6.75
No. 112, Lowell Special Sprayer—Tin, each.....	.50
No. 113, Lowell Special Sprayer—Galvanized, each.....	.75
No. 115, Lowell Continuous Sprayer—Tin, each.....	1.00
No. 116, Lowell Continuous Sprayer—Galvanized, each.....	1.25
No. 122, Lowell Midget Sprayer, each.....	.35

We have a very attractive booklet which will give you much valuable information about spraying and mixing sprays, also a calendar in regard to spraying. “Yours for the asking.”

BASKETS AND BERRY BOXES

We carry the Wells-Higman Co. line of packages and believe they make the best on the market. We recommend them to you.

Conditions are such that we cannot name prices at this time (Jan. 1st to 20th) for any definite period, as the manufacturers have not as yet secured their timber supply for 1920 and the labor situation at the mills is more or less an unknown factor.

	PRICES	Per Doz.
Bushels	\$2.00
Bushels and covers	2.70
Half-Bushels—side handles	1.80
Half-Bushels—bale handles	2.00
Bushel covers80
Half Bushel Covers70
		Per M.
4 qt. complete, Raised Slat Covers.....	\$52.00
4 qt. without Covers	40.00
4 qt. Raised Slat Covers	15.00
4 qt. complete Flat Grape Covers	48.00
4 qt. Flat Grape Covers	10.00
2 qt. without Covers	30.00
Quart boxes	10.00
16 Quart crates, filled, each.....30

Special prices in large quantities.

Prices subject to change.

“ARCO” BLACK GLAZING CEMENT

This Glazing Putty is a plastic material, made from selected long fibre asbestos, combined with several especially compounded oils and gums thoroughly mixed to a smooth, even, consistency; it is recommended for caulking around windows, skylights, chimneys, vents, and it thoroughly seals.

We recommend the Arco 834 Gun, which is designed especially for handling “Arco.”

Arco never dries out. Never crumbles.

PRICES

Arco, in barrels.....	.....	15c per lb.
Arco, in half-barrels .....	.....	15c per lb.
Arco, in kegs, (130 lbs. to 180 lbs.) .....	.....	17c per lb.

This is the best grade of Glazing Putty that can be made at any price. If you desire a cheaper product, we quote in barrels as low as 10c per lb., delivered.

We give an Arco No. 834 gun absolutely free with every barrel of Arco. No. 834 extra guns will cost you \$3.50 each.

WARD - SCHOPPS CO.
GRAND RAPIDS, MICH.



Grand Rapids Forcing Lettuce

